



Photo by Dennis Keim

Joe Rothenberg (second from left) tours the Materials and Processes Lab's Rapid Prototyping Facility with from r to l: Acting Center Director Carolyn Griner, Space Transportation Programs Manager Rick Bachtel, Material and Processes Lab Director Dr. Ann Whitaker, and Ken Cooper.

Rothenberg Sees Marshall Center From New Perspective

NASA's recently appointed Associate Administrator for the Office of Space Flight, Joe Rothenberg, visited Marshall Center last week and was briefed on a variety of current topics. As part of the visit, he shared his initial impressions with center employees in a Morris Auditorium talk.

The visit convinced him that "Marshall is one of the other best kept secrets in the Agency," Rothenberg commented, borrowing words used by Administrator Dan Goldin in another connection, but just as applicable here.

I sense that people here are excited about what they're doing," he added.

Another overall impression, he said, is that Marshall is "doing leading-edge technology and without that technology, we are not going to leave Earth orbit with humans in the near future."

Citing some of the significant challenges to be addressed, both for Marshall and NASA, Rothenberg stressed the importance of a vision. "If we don't have a vision and start developing technologies to enable that vision, we are going to (a) continue to lose good people, (b) lose the interest of Congress right after Space Station gets in orbit, and (c) slowly wither away."

In his new position, Rothenberg will lead the Agency's Human Exploration and Development of Space Enterprise, or HEDS. In that capacity, he said, "One of my visions is for HEDS to focus on

See **Rothenberg** on page 2.

AXAF Clears Key Hurdle

By John Bryk

NASA's most powerful X-ray observatory successfully completed the first of four mission operations tests last week.

For the first time, on February 2, operators at the observatory's control center in Massachusetts sent commands to the Advanced X-ray Astrophysics Facility telescope in California, where it is undergoing final assembly.

Commands were routed from the control center through NASA's Deep Space Network to the observatory. The test exercised numerous elements of the system that will be used to control the observatory in orbit.

"We're delighted with the results of this initial test and with the performance of the entire Advanced X-ray Astrophysics Facility team," said Tom Rankin, manager of the Operations and Science Center Office at NASA's Marshall Space Flight Center in Huntsville, Ala. "In fact, things went so well that we completed all

See **AXAF** on page 4.

Space, Industry Researchers Gain Insight Into Deadly Virus

By Bob Thompson

NASA and industry biotechnology researchers have taken an important step toward developing a treatment for a life-threatening virus that causes pneumonia and severe upper respiratory infection in infants and young children.

The infection, called Respiratory Syncytial Virus, attacks the respiratory airways and lungs. According to the National Academy of Sciences' Institute of Medicine in Washington, DC, nearly four million children ages one to five are infected every year in the United States by the virus. Approximately 100,000 of these children require hospitalization and 4,000 die annually from the resulting infection. The virus is considered by physicians to be the most serious infectious disease for infants in the United States. "Through NASA funded research in space and on the ground, and the application of space technology, we have determined the three-dimensional atomic structure of a potentially very important therapeutic antibody to this virus," said Dr. Daniel Carter, president of New Century Pharmaceuticals in Huntsville.

See **Virus** on page 4.

Rothenberg

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how to utilize and upgrade Space Station over time, so we'll be able to use it in ways we can't envision today." The long-term significance for Marshall, he noted, is that "the central point for payload operations on Station is right here at Marshall."

As a statement of broad-brush guidance, Rothenberg urged members of the Marshall team to "use your creativity, use your imagination, keep those technology programs going, keep the Shuttle program continuing to improve and expand."

Rothenberg also answered employee questions, including what he sees as Marshall's primary areas of contribution. He answered by pointing to the fact that about 40 per cent of Marshall employees work in propulsion in one form or another, making it a top priority "that is not going to go away." As other areas, he cited:

- Operating the payloads on the Space Station "— and growing that area;"
- Continuing its in-depth engineering support of the Shuttle;
- Pursuing science programs, including possible new opportunities there; and
- Development of Reusable Launch Vehicle technology, to provide the nation with much-needed lower-cost access to space.



Photo by Dennis Keim

A Fond Farewell

Former Marshall Center Director Wayne Little and his wife, Bebe, hold a certificate recognizing his receipt of NASA's Distinguished Service Medal at Littles' community farewell reception Feb. 5 at the Huntsville Marriott. The reception, sponsored by the National Space Club and Chamber of Commerce, recognized Littles for his many contributions to NASA, particularly to Marshall. Littles retired Jan. 3, after more than 30 years of government service.

125 Marshall Employees Take NASA's Buyout Incentive Plan

Marshall's latest "buyout" or opportunity to receive separation incentives ended Feb. 3, with 125 employees taking advantage of the offer which covered a period that began Aug. 1, 1997.

The buyout offered retirement or separation incentives of up to \$25,000 for eligible employees, as part of Center's goal to bring the Marshall civil service strength down to approximately 2500 by the year 2000.

Following is a list of employees who took the buyout:

Name	Org
Andrew, Clayton	ED31
Arcilesi, Camillo J.	JA01
Berridge, Charles A.	SA29
Bishop, Gerald	EE25
Blount, Dale H.	EP33

Bond, William M. Jr.	ES93
Brandon, Patricia D.	EL24
Brandon, Walter W. Jr.	PD11
Brooks, Joe D.	EL24
Burton, John W.	EP51
Butcher, Shirley Ann	JA61
Bynum, Julian E.	EH22
Carlisle, John G.	EE61
Carr, Judith M.	EM31
Carter, Ruby B.	BC01
Chappell, Charles R.	DS01
Chisholm, William L. Jr.	ES93
Clark, James W.	JA41
Clough, Daniel R.	AA01
Cornelius, Charles S.	EP31
Counts, Richard H.	EP33
Craft, Harry G. Jr.	LA01
Crisler, Johnny P.	EL72

De Sanctis, Carmine E.	PS01
DeHaye, Robert F.	EH12
Domal, Alexander F.	EE54
Donehoo, Larry K.	ED34
Elrod, Margaret V.	PD21
Engle, Ginger Ann	EH42
Farmer, John E.	ED12
Forney, James A.	AI51
Foster, John William	EP13
Franck, Charles G.	SA29
Gauthier, Melinda E.	GP50
Gross, Klaus W.	EP12
Grubbs, James P.	JA41
Guest, Stanley	EJ43
Hall, Gerald E.	MG23
Hammac, Houston M.	ED72
Hassler, Preston L. Jr.	EJ43

See Buyout on page 4

Focusing on Black History Month

Marshall Equal Opportunity Director Discusses Diversity

Marshall Equal Opportunity Director Charles Scales began his NASA career at the Center 25 years ago as a 19-year-old, "directionless" college student. What began as a mere job has grown into a sound, productive career. Following are excerpts from an interview the *Marshall Star* recently conducted with Scales.

Marshall Star: *What is the Equal Opportunity Office all about?*

Scales: When I talk to people around the Center, and they want to talk about EO, the first thing that comes to their mind has to do with discrimination and complaints. They believe that's the big driver in the office. While that's a significant part of what we do, it's really only a small part. Additionally, we manage the affirmative employment plan, which means we keep up with statistics on the ethnicity of Center employees. We prepare affirmative employment plans. We compare the Center's workforce in terms of ethnicity to that of the civilian labor workforce to see how well we're staying in balance in the civilian labor force. We even look at in terms of specific categories — chemical engineers, mechanical engineers — and provide that data to Center management. We also handle the minority education program in this office, which is really a fun thing to do because we get to work with minority universities — historically black schools, Hispanic-serving institutions and tribal colleges. We manage, in conjunction with the technical monitors out in the laboratories, the grants we have with them. These grants represent a small amount of money, but that NASA "meatball" is still exciting to a lot of schools. Besides that, we get to work with the Minority Scholars Program, which means every summer we have minority students majoring in science and



Charles Scales

engineering spend a 10-week internship here at the Center, and that's gratifying to see the sparkle in those young peoples' eyes. We get to see our future minority engineers and scientists early. The Center does a great job of matching them with mentors during the summer. Another of our functions is the disabilities program. We work with disabled employees to make sure the facilities are accessible. We work with our facilities office to identify where there may be problems, such as a building in need of modifications or handicapped parking spaces. That's real gratifying to be part of as well.

Marshall Star: *How does equal opportunity fit into Marshall's mission?*

Scales: My preference would be to talk about it in terms of EO and diversity. There is no conflict between diversity and excellence. I think over the years people have looked at equal opportunity and diversity as achievable only with lowered standards, and that is not at all what we're talking about. We're talking about well-qualified individuals that are diverse in terms of ethnicity, in terms of gender, age, and disability. When you have a diversified workplace, you generate diverse ideas. That is

what diversity and equal opportunity bring to the Center — more ideas and different ways of looking at things. When I talk to students at schools and they asked me what I do, I say that I'm in equal opportunity and that working at NASA is a lot of fun, so much fun, in fact, that some people might try to have all the fun. My job is to make sure the fun gets shared.

Marshall Star: *What goals have you set for EO?*

Scales: I like to do a better job communicating to the employees at the Center what our office is all about. I want to make it a place they readily want to come when they have an issue to address. I'd like for them to know when they have an issue, they can come by, sit down, and we can talk about it. I'd like for the place to be a little warmer, if you will...to remove that image of this office being that place in the corner of second floor of 4200 that no one dare see you go to.

Marshall Star: *What challenge(s) do you hope to overcome?*

Scales: Probably the biggest challenge is to remove the stigma of the office. I think we're making headway in that area. I couldn't be more pleased with the staff here. They tell me that they're beginning to see a change in the attitude of the people they come in contact with daily. I think we just have to communicate, communicate, communicate, what we do and why we do it.

Marshall Star: *Since we're all part of the same Marshall team, and the success of all Center organizations is everyone's concern, how might employees contribute to equal opportunity goals we talked about earlier?*

Scales: Employees themselves need to
See Scales on page 5.

Buyout

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Hickam, Homer H.	EO65	Newsome, Julie E."	EO46
Hiss, Gayla K.	EO37	Newton, James H."	EL71
Housley, John A.	SA45	Patterson, Valerie J.	LA02
Hovis, Shirley S.	CM41	Pessin, Myron A.	EE31
Humphreys, John T.	TA31	Pizitz, Tina M. S.	ES41
Ise, Jerry B.	CA20	Posey, Linda B.	RA02
Jackson, Robert L. Jr.	EJ71	Priest, Ruth A.	MG10
Jacobs, Edwin P.	EE23	Rehage, Jon Richard	EB31
Jobe, Grady S.	EA01	Rowe, Robert J.	EB43
Johnson, Sharon M.	FA01	Rozeat, Carrol J.	AB31
Jones, Lee W.	EP01	Russell, Willa M.	EM21
Kay, Elizabeth R.	PS05	Self, Deemer O.	SA71
Kay, Linda P.	AI51	Shell, Michelle Q.	EO37
Lackey, Donald L.	BC01	Sisk, Amelia M.	SA45
Lake, Robert E.	JA41	Smith, Harvey F.	EJ71
Langley, Michael E.	CR10	Smith, Robert E. Jr.	EL21
Leckie, Gene A.	AI01	Smith, Shelby C.	TA01
Levine, Jack	RA30	Smith, Susan M.	DE01
Linton, Roger C.	EB52	Snoddy, David E.	ED71
Little, Thomas T.	CR85	Southall, Katherine W.	CR55
Littles, J. Wayne	DA01	Soutillo, Becky C.	EJ32
Lohr, Jonathan C.	ED13	Spotswood, Sherri S.	EE25
Machen, Jyles L.	PA01	Stone, Richard N.	EL61
MacPherson, John F.	EE61	Sumner, Craig E.	SA31
Mann, Era N.	EL72	Talley, Drayton H.	TA61
Manning, Martha K.	EM31	Taylor, David T.	PP03
Martin, Buddie J.	EL32	Taylor, Shirley L.	EP52
McAlister, Brenda H.	LA01	Teal, Marion L.	EB31
McCullar, Barney R.	AB01	Thompson, Gayla S.	SA59
McCullar, Jeanette Skinner	EO47	Thompson, Richard L.	EP51
McDonald, Angela C.	BF60	Thompson, Tempie W.	FA31
McIntosh, Charles R.	EH31	Toelle, Ronald G.	EE61
McMeans, Grady L.	EB13	Tomlin, Donald D.	ED12
McNeely, Ralph D.	EE11	Turner, Barbara B.	MG01
Mendrek, Mitchell J.	EH22	Urban, Eugene W.	ES01
Messer, Cecil W.	EE22	Vallely, Donald P.	ED11
Moe, Dolores D.	RA02	Villella, Felminio	EB13
Morris, Charles W.	EB33	Weiler, Jerry D.	EO41
Moss, John D.	EE31	Wheeler, John T.	ED01
Nein, Max E.	PS02	White, Joe E.	ED51
Nelson, Paul E.	EO02	Williamsen, Joel E.	ED52
Neuschaefer, Robert W.	CR01	Wiser, James N.	PD11
		Young, Ronald L.	RA02

AXAF

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the objectives scheduled for the two-day test in just over one day. From the very first command sent at 9:30 a.m., Monday, the observatory received and responded as expected to about 10,000 instructions. This was truly a group effort," said Rankin.

The Advanced X-ray Astrophysics Facility program is managed by the Marshall Center for the Office of Space Science, NASA Headquarters, Washington, D.C. TRW Space & Electronics Group of Redondo Beach, Calif., is assembling the observatory and doing verification testing of the facility. The Advanced X-ray Astrophysics Facility Operations Control Center, operated by the Smithsonian Astrophysical Observatory in Cambridge, Mass., transmitted all commands during this test and will control the observatory in flight. A technical support team at Marshall Center monitored data from the observatory during the test.

With a resolving power 10 times greater than previous X-ray telescopes, the Advanced X-ray Astrophysics Facility will provide scientists with never-before-seen views of X-ray sources, including black holes, exploding stars and interstellar gasses.

The mission operations test was the second milestone for the observatory in less than a week. Jan. 29, TRW successfully completed the first series of Comprehensive Acceptance Tests. These tests consisted primarily of a checkout of the observatory's spacecraft systems. The successful completion of these tests shows that the hardware and software systems, which make up the spacecraft, are working as designed.

A similar mission operations test will be conducted while the observatory is still in California. Two more tests will be performed after its arrival at NASA's Kennedy Space Center, Fla., for launch onboard the Space Shuttle later this year.

Black History Month Upcoming Events

Lester Jones, Regional Vice President - Primerica Financial Services, will conduct a Lunch-n-Learn seminar on February 24 at 11:00 a.m., Morris Auditorium. Jones will speak on Debt Management and Investments.

The Grand Finale of Black History Month will be Feb. 26, at 9:00 a.m. in the Morris Auditorium. The guest speaker will be Dr. Delbert Baker, president of Oakwood College. There will be a continental breakfast before the program. The continental breakfast will start at 8:30 a.m. The actual program should not last more than an hour. The Black History Committee encourages everyone to participate.

Upcoming Events

Employee Update

An employee update is scheduled for 10 a.m. March 11 in the Morris Auditorium. Employees with questions should submit them to judy.werner@msfc.nasa.gov no later than the close of business Feb. 20.

Marshall Retiree Dinner

The annual dinner honoring Marshall Center retirees is set for March 24. Anyone interested in showcasing their talent during the event should call Rhonda Stricklin at 4-2361 or Edwina Bressette at 4-8115, or send a "talent description" via e-mail to rhonda.stricklin@msfc.nasa.gov or edwina.bressette@msfc.nasa.gov. The deadline for receiving the information is today.

Open House '98 Homepage

The official homepage for Marshall's Open House is up and running. Visitors to the site can volunteer for the event, peruse the exhibiting organizations' homepages, or look up Marshall Open House policies and guidelines. The Marshall Center Open House is scheduled for 9 a.m. to 6 p.m. May 16. The web address is: www.msfc.nasa.gov/openhouse/

Recycling Logo Contest

The Marshall Recycling Committee is inviting all employees and on-site contractors to participate in its Earth Day T-shirt logo contest. The theme is "Clean Water for Future Generations." Submissions should be a picture on an 8 1/2" X 11" piece of white paper and must have no more than four colors. The winner of the contest will receive \$50. The deadline is Feb. 25. For more information, call Reginald Alexander at 4-9289.

Scales

Continued from page 3

become more proactive in their own development and continue to develop and to take training whenever you get the chance. One thing I've found to be very important is to learn from every assignment you get. Regardless of what the assignment is, there's something to be learned from it. If you continue to do that, you'll continue to grow. Continue to show that you want to learn, that you want the tough assignment, that you want to be the go-to person when the game is on the line, even if you fail. I think that's one of the most important things employees can do,

Virus

Continued from page 1

Antibodies aid the individual's immune system by neutralizing toxins, such as viruses, as they attempt to invade healthy cells. Knowledge of the molecular structure of the antibody will permit scientists to understand key interactions between the antibody and virus, facilitating development of treatments for the disease.

"Currently, there is no vaccine against the virus," said Simon McKenzie, chief executive officer of Intracel Corp. in Issaquah, WA, which developed and produces the antibody.

"Since this antibody neutralizes all known variants of the virus, therapeutics developed from it should have a major impact on lowering the mortality rate caused by the disease. And knowing its structure will provide key insight into our future development activities."

The illness most frequently begins with a fever, up to 101 degrees Fahrenheit, along with runny nose, cough and sometimes wheezing and trouble breathing. When his six-week old daughter caught the respiratory infection, Carter saw the effects of the virus firsthand. "There was nothing the hospital could do for her," he said. "We brought her home, watched as the infection ran its course and hoped for the best," he said. His daughter recovered.

regardless of your ethnic makeup or gender. Learn what the Center mission is, and then learn what you can do to contribute. Role models are important, but in the final analysis, it comes down to the individual.

Marshall Star: *If there's one thing you'd like employees to know about the EO office, or take with them after a visit with your staff, what would it be?*

Scales: I was treated fairly. I was treated with dignity and respect. And I feel that it's a place I can return to anytime I have a problem.

Carter's research team used the viral antibody to grow antibody crystals aboard the Space Shuttle Columbia in June and July of 1997. In the weightless environment of space known as microgravity, the antibody crystals grew larger and were of better quality than those previously grown on Earth.

Using highly specialized X-ray equipment and computers, scientists at New Century Pharmaceuticals located the key positions of individual atoms in the crystal structure and constructed a model of the antibody. Because of the perfection and increased size of the space-grown crystals, the researchers were able to precisely determine the atomic structure of the antibody.

Dr. Arnauld Nicogossian, Associate Administrator of NASA's Office of Life and Microgravity Sciences, Washington, DC, which sponsored the joint research effort by government and industry, said, "This concrete benefit to human health is invaluable in demonstrating the importance of space-based research in solving Earth-based medical problems, as well as the need to have a permanently orbiting research facility. The International Space Station, to begin assembly later this year, will be at the forefront of new medical discoveries while it opens the space frontier to exploration."

Employee Ads

Miscellaneous

- ★ P586, 166MHZ, 64MB, 17" monitor, 2 gigHD, lightwave 3D, software \$2,500. 776-3869 call after 7 p.m.
- ★ Compaq laptop, Pent 150, Window 95, internal CD-ROM, floppy, internal modem, 1.5GB HD, case, \$2,200 negot. 882-2337
- ★ Hard drive, Western Digital IDE 1.2 MB, \$100. 883-4309
- ★ Beagle pup needs good home, female, 7 months old, \$50. 971-1414
- ★ Murray lawn tractor 12 HP, 38", 5 years old, \$450. 864-0155
- ★ "Bear" Bryant Crimson Tide wall clock, 19"w x 13"h, new in box, \$75. 881-5043
- ★ MacIntosh IISI 5/80 CPU, \$80; peripherals available. 837-0656 or e-mail: <http://www.pobox.com/nbwalls/stuff.html>. 837-0656
- ★ Baby bed for sale. 837-5113
- ★ Camper, \$2,800, 14 foot, Scamp, full kitchen, closet, dinette, sleeps up to 4 (two more comfortably). 539-1995
- ★ Washer, \$125 and dryer, \$85 or \$200 for both. 461-0230
- ★ 486DX computer, CD-ROM, 32RAM, sound card, MS Office, Photoshop & more, \$700. 721-5609
- ★ Dynasty classic wool rugs, red. 350-3784
- ★ New Delta single handled kitchen faucet with sprayer and soap dispenser, model 400DWF, \$49. 883-8257
- ★ Opportunity for golfers. 2 wks timeshare, Hilton Head, \$6,000 ea., free golf, 3 courses. 539-1995
- ★ IBM Thinkpad, Pent 133, Win. 95, Internal, CD-ROM, external floppy, internal modem, 1.4GB HD, case, \$2,200. 882-2337
- ★ Man's sport coats size 38R, \$25 ea.; double-breasted suit size 38R, \$45. 776-9165
- ★ Four J. C. Penney winter nursing shirts, \$15 ea. 883-9361
- ★ Girls 20" Pacific brand bicycle, \$95. 881-7954
- ★ Single hide-a-bed, \$75; occasional naugahyde chair, \$40 or best offer. 885-1771
- ★ Plot with two lawn crypts and bronze markers in Valhalla Memory Gardens. 828-0177

Vehicles

- ★ Honda CRX-SI, sunroof, timing belt, CVs, never wrecked, non-smoker. 650-0677
- ★ 1987 S-10 Tahoe pickup, V6, automatic, camper shell, \$2,500. 837-0085
- ★ 1996 Pontiac Trans Sport van, PW, PD, PL, cruise, tilt steering wheel, 7/8 passenger, \$14,200. 830-8339
- ★ 1986 Pulsar, red, sunroof, AM/FM, \$1,500. 851-6864
- ★ 1983 GMC van, 9K miles, rebuilt engine, custom

MARSHALL STAR

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- interior, stereo, CB, \$2,800. 721-5609
- ★ 1995 Acura Integra, special edition, 3-door, leather, sunroof, 26K miles, \$13,400. 539-0094
- ★ 1991 Chevy S-10, AC/PS/AT, 133K miles, rear sliding window, tool box, tinted windows, alarm, 4.3L engine, \$3,700. 539-6932
- ★ 1994 Pontiac Grand Prix SE, AC/AT/PW, 36K miles, \$9,500. 650-2173
- ★ 1986 Corvette hatchback, 95K miles, automatic, red exterior/interior, NADA \$11,400, asking \$10,500. 533-0038

Wanted

- ★ Pickup camper, later model, 9' or 10'. 864-0155
- ★ A punching bag. Call and leave message. 721-1303

Found

- ★ A pair of eye glasses found, building 4200, call 4-4758 to identify.
- ★ Table lamp found outside of east door at building 4465, call 4-4758 to identify.
- ★ Adding machine found building 4202, call 4-4758 to identify.

Free

- ★ Coon hound mix puppies, 10 weeks old, great with children. 883-7089
- ★ Two female Australia shepherd dogs. 420-5938

Lost

- ★ Key chain with AU fob, made from circuit board material, several keys. 837-0656
- ★ Brown floral silk scarf, building 4200 (or adjacent parking lot). 4-8115
- ★ Gold hoop earring lost in 4200 area. 247-5780

Carpool

- ★ Decatur to NASA on Mon., Wed., and Fri., flexible hours, nonsmoker. 351-6855

Center Announcements

- ☛ **Shuttle Buddies** —The Shuttle Buddies will meet for breakfast Feb 23 (last Monday of each month) at 9:15 a.m. at Shoneys, University West. For more information call Deemer Self at 881-7757.
- ☛ **Engineers Week** —The Annual Engineers Week Awards Banquet will be held on Feb 26 at the Huntsville Marriott at 6:30 p.m. Tickets cost \$20 per person. For additional information call Herb Shivers at 534-8483 or Robert Van Peurse at 533-6617.

- ☛ **NARFE** —The National Association of Retired Federal Employees will meet Feb. 14 at the Senior Center on Drake Avenue. A representative of the Huntsville Police Department will discuss how citizens complaints are handled by its internal affairs division. Refreshments at 9:30 a.m., program at 10 a.m. For more information call 837-0382 or 881-3168.
- ☛ **Toastmasters International** — The NASA Lunar Nooners Toastmasters Club will meet Feb. 17 at 11:30 a.m. in the 4610 cafeteria conference room. For more information, call Debbie Hagar at 461-4992, or Lee Johns at 544-5142.
- ☛ **Stop Abuse** — Aware of waste, fraud or abuse? Telephonically contact the MSFC Office of Inspector General at 544-9188 or send complaints to Mail Stop M-DI. Confidentiality will be maintained.
- ☛ **NASA Exchange** — Executive Tour & Travel Service, Inc., through the MSFC Exchange, is offering another Grand Bahama Vacation Cruise-N-Stay for \$224 per person. The package includes: 3 nights hotel accommodations at the Bahama Princess Resort & Casino; 6-hour cruise from Ft. Lauderdale to Freeport, Grand Bahama Island including breakfast and lunch (travel to Ft. Lauderdale not included); 6-hour moonlight dinner cruise back to Ft. Lauderdale; port taxes and service fees also included. A deposit of \$155 by March 13 is required and included is \$100 in airfare coupons with each deposit. Travel dates are good through March 1999. For more information see "Inside Marshall, Employee Information, NASA Exchange" or call Executive Tour & Travel at 1-800-272-4707. The NASA Exchange Account reference is ER11583 and is available to MSFC employees, retirees, and on-site contractors.

Job Opportunities

- Reassignment Bulletin: 98-8-RE, AST, Technical Management, GS-801-11/12/13**, Program Development, Program Planning Office, Engineering Cost Office. Closes Feb. 12.
- Reassignment Bulletin: 98-7-CP, Budget Analyst, GS-560-11/12**, Office of Chief Financial Officer, Resources Management Office (4 vacancies). Closes Feb. 23.
- CPP 98-26-CL, Secretary (OA), GS-318-7**, S&E, Materials & Processes Laboratory. Closes Feb. 18.
- CPP 98-29-MB, Technical Requirements Support Assistant, GS-301-5**, S&E, Mission Operations Lab., Operations Engineering Division, Data Systems Branch. Closes Feb. 24.
- CPP 98-27-RE, Internal Relations & Communications Officer, GS-301-14/15**, Customer & Employee Relations Directorate, Internal Relations & Communications Office. Closes Feb. 18.

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